



## MILATARI NEWSLETTER

Volume 2 Number 7

June 1983

Price \$1.00

### \*\* NEXT MEETING \*\*

SATURDAY, JUNE 18<sup>th</sup> - Open at 2PM

ARMBRUSTER SCHOOL - GREENDALE

### MEETING ADGENDA

2:00 PM Basic class - Linda Scott  
Review beginning BASIC instructions

2:00 PM Education S.I.G. - Joe Sanders  
Organization meeting

3:00 PM Business meeting  
Officers' reports  
Old business  
New business

4:00 PM Report from C.E.S.  
Several members will share their observations  
from the Summer C.E.S.  
Slides of the NEW Atari products will be shown

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Milwaukee Area ATARI Users Group

This newsletter is written and printed by members of the Milwaukee Area ATARI Users Group (MILATARI), an association of individuals with a common interest in using and programming ATARI computers. MILATARI is not affiliated with the ATARI company, nor any other commercial organizations.

All articles are written and donated by the membership. Opinions expressed in this publication are those of the individual author and do not necessarily represent, nor reflect, the opinions of MILATARI nor those of any other commercial or non-commercial organizations. Any article appearing in this newsletter may be reproduced, providing credit is given to the author and to MILATARI.

Write MILATARI Newsletter at P.O. Box 1191, Waukesha, WI 53187.

MEMBERSHIP INFORMATION

Membership is open to individuals and families who are interested in using and programming ATARI computers. The membership includes the subscription to this newsletter and access to the user's library. The membership fee is \$15 per year for individual, \$20 for family and \$10 for associate. Contact Larry Leskovsek, Treas. at 547-0249 or write MILATARI, P.O. Box 1191, Waukesha, WI 53187 for more information.

MEETING INFORMATION

MILATARI meetings are held once monthly. This month the meeting will be held at the Armbruster School, 7000 Greenway, Greendale, WI. The meeting is held in the multi-purpose room. BASIC classes begin at 2:00 P.M. Technical sessions are also held a 2:00 P.M. The business session begins at 3:00 P.M. followed by demonstrations. The library will be open before and after the business meeting.

MILATARI Officers:

President	Gary Nolan 353-9716
Vice-president	Chris Stieber 529-2663
Treasurer	Larry Leskovsek 547-0249
Secretary	Jim Comaris 353-3447
Eduction Chairperson	Linda Scott 466-2314
Cassette Librarian	Ron Friedel 354-1717
Disk Librarian	Steve Booth 367-8739
Publications Librarian	Karl Buschhaus 774-2576
Newsletter Editor	David Frazer 542-7242
Bulletin Board SYSOP	Bill Simotti 352-1790

Technical support Group:

The following members have indicated a willingness to assist MILATARI members.

William Lawrence	1-968-3082
Don Wilcox	Programming 228-1650
Erik Hanson	Programming 252-3146
Gary Nolan	Prog/Tech 353-9716
Steve Booth	Prog/Tech 367-8739
Nick Liberski	Programming 786-8434
	Prog/Tech

MILATARI Bulletin Board:

The MILATARI Users Group maintains a 24 hr bulletin board service. The phone number is 352-2772.

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## HOW TO USE THE MIL-ATARI SUPER AMIS BULLETIN BOARD SYSTEM

By SYSOP- BILL SIMOTTI

**PRIMARY FUNCTION:** to allow the user to download programs from the BBS that later can be run on his/her computer. Also to upload files/programs that you have, to the Mil-Atari BBS.

**SECONDARY FUNCTION:** full message system, with Account number and Password. If a user elects to send and receive private messages, he/she must request a password during sign-on. The password and account number will be activated within one week. Check "Z" in the main menu for your name and account number, to see if your password is functional. Only a user with an account number and password can send and receive private messages.

**SPECIAL FUNCTION:** information database- Data info files called "SIGx", (x=number of sig). Special Interest Group, taken from comp-u-serve's sig-atari BBS. These files contain latest Atari fact and/or rumors posted on the sig on compuserve by many of the Atari users.

### Modem/ B.B.S./ ONLINE DEFINITIONS

**B.B.S.- Bulletin Board System**

**A.M.I.S.- Atari Message Information System**

**Super A.M.I.S.- AMIS with private message system**

**MODEM-** hardware needed to connect phone to Atari 850 interface (in some cases directly from phone line to computer)

    A. Smart modem- a modem that has a computer built in for auto-answer/ auto-dial the phone by computer/user commands and other functions.

    B. Dumb modem- a standard modem other than above.

**TERMINAL SOFTWARE-** the software used in the computer to connect and run your modem, to access over phone line.

    A. Smart software- ability to upload and download and to use full computer ability and memory.

    B. Dumb Software- telalink, as an example, allows data from phone line to appear on TV screen, only. Your computer is called a dumb terminal, as this is all it can do.

**UPLOAD-** send your file/ program/ data to another system.

**DOWNLOAD-** take data/ file/ program from another system.

**ASCII-** universal code for over the phone data communication between most types of computers.

**ATASCII-** Atari ASCII, all atari codes needed and used in programming and data transfer of atari files.

**TRANSLATION-** either ASCII or ATASCII

**FULL DUPLEX:** used to communicate to any B.B.S. or Atari B.B.S.

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HALF DUPLEX: used to communicate to any other computer that is being run as you are, manually.

CARRIER- a tone signal to establish a link between two modems for data transfer. A connection would be called a "hand-shake" or "on-line".

SYSOP- system operator (B.B.S.)

XMODEM TRANSFER PROTOCOL- use with atari computers/ modem and software to verify that each file/program sector is being sent over the line correctly. Used especially to send and receive atari programs without error.

PUBLIC DOMAIN PROGRAMS- programs/ files that can be copied and that are not for sale.

## MIL-ATARI BBS ACCESS DIRECTIONS

### BEFORE YOU CALL:

- turn on your modem, interface and disk drive
- load your terminal software
- switch translation to ATASCII, ATARI TERMINAL MODE
- to check if in ATASCII, hit inverse key and type something in terminal mode, if you see what your type is in inverse, then you are in ATASCII.

CALL MIL-ATARI BBS: (414)352-2772

- the BBS should answer within one ring, if not after 3 rings, hang-up
- when a tone from the BBS is heard, switch in your modem by "originate"

### ONLINE:

- you will see-
- "ATARI USERS GO ATASCII, HIT <RETURN>"
- if you are in ATASCII, you should see ATASCII in inverse, otherwise you are not, then this is the time to switch into it from your terminal software before you hit return
- when prompted for name and address, type it in using upper case only.
- in the main menu, type "H" or "?" for definitions of menu commands.

MIL-ATARI SYSOP, BILL SIMOTTI - (414)352-1790

## EDUCATIONAL S. I. G.

Joe Sanders - Chairman  
(414)447-1660

The MILATARI User Group has established a committee for members who have expressed an interest in software and training for educational application. This special interest group will be addressing the needs of members who want to extend their use of computers in areas other than entertainment.

In order to accomplish the immediate goals of the committee, members should make an effort to attend our June 18, meeting scheduled for 2:00 p.m., before the regular business session, at Armbruster School, 7000 Greenway, Greendale, Wi. The meeting for educational users is open to everyone.

Questions concerning the committee should be directed to Joe Sanders, 447-1660.

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**CSD COMPUTING SHORT COURSES**

SUMMER, 1983

The Computing Services Division at the University of Wisconsin-Milwaukee short courses for the summer semester, 1983 will be scheduled on the basis of demonstrated interest. Many of the courses should be of interest to MILATARI members with some of courses utilizing the ATARI 800.

Tom Krischan will be teaching several of the course listed below. Please call Tom at (414) 963-4008 for course descriptions and further details

**CSD COMPUTING SHORT COURSES -- SUMMER, 1983**

**FREE SEMINARS -- One session each**

**CSD Facilities and Services**

1 session	1-1/2 hours	Free
Data Entry		
1 session	2 hours	Free
UWM/INFO		
1 session	1 hour	Free
Introduction to UDH on the Univac 1100		
1 session	2 hours	Free
Introduction to MISER on the Univac 1100		
1 session	2 hours	Free
Overview of FORTH		
1 session	2 hours	Free

**NON-CREDIT SHORT COURSES**

**Introduction to Computing on the Univac 1100**

6 sessions 1 hour/session \$20/\$40\*\*

**Interactive (Demand) Processing on the Univac 1100**

6 sessions 1 hour/session \$20/\$40\*\*

**Interactive Statistics on the Univac 1100**

6 sessions 1 hour/session \$20/\$40\*\*

**Magnetic Tape Handling**

4 sessions 1 hour/session \$10/\$20\*\*

**Microcomputers for the Human Being**

4 sessions 1 hour/session \$10/\$20\*\*

**\*So You Want to Buy a Microcomputer...**

1 session 3 hours \$10/\$20\*\*

**Personal Computer BASIC for Beginners**

6 sessions 2 hours/session \$30/\$60\*\*

**Telecomputing with Microcomputers**

2 sessions 2 hours/session \$10/\$20\*\*

**\*Computer Game Design**

1 session 3 hours \$10/\$20\*\*

**\*Intermediate Graphics and Animation**

3 sessions 2 hours/session \$20/\$40\*\*

**OTHER POSSIBILITIES**

UNIX -- course length and cost to be determined

C -- course length and cost to be determined

\* = courses which exclude the use of the ATARI 800

\*\* = The first course fees listed are for UWM students, faculty or staff.

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Others pay the second (higher) fee.

Each course will be scheduled if a sufficient number of responses are received by Monday, June 27th. Everyone who completes a short course interest form will be contacted about when and where the class will be held. Send your interest form to:

User Services - UWM Computing Services  
EMS E380  
P.O. Box 413  
Milwaukee, WI 53201

CSD Short Course Interest Form -- Summer, 1983

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

**TIMES PREFERRED**

**(indicate both days and time)**

COURSES	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
1. _____	_____	_____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____	_____	_____

**DOUBLE DENSITY  
ON YOUR ATARI 810 ?????**

(This message was pulled off the ATARI bulletin board on the *The SOURCE*. Hopefully, one of the hackers in our membership will get a hold of this conversion and submit a review.)

NO, THIS IS NOT A TRANSMISSION ERROR! Your 810 disk drive can now become a DOUBLE DENSITY powerhouse with the new NCT "810 TURBO" Conversion Board by NCT. The "810 TURBO" easily installs INSIDE your 810 with no cutting, wiring, or soldering. A simple project with complete, clear installation instructions. And it even does a couple of other nice little things:

DOUBLE DENSITY - Format, read & write. Totally compatable with Percom and the new Atari DD coming soon. THINK ABOUT IT! Now - 176K on every disk!

SINGLE DENSITY - Your existing disks will still load with "810 TURBO" and they'll do it much faster and a lot more efficiently.

AUTO READ - No switches, no software. "810 TURBO" KNOWS if it's SD or DD.

DATA SEPARATOR - Greater speed tolerance. No more error-138 or error-144.

FAST CHIP - EVERYTHING happens faster! Format, read and write!

BACKEMUP - INCLUDED! Back up your expensive protected disks - all of 'em!

PACKEMUP - INCLUDED! Cut backups, then pack them on one disk for economy.

RETAIL \$295.00 (Complete - no extras) SOURCE SUBS INTRO OFFER - \$230.00

NCT - P.O. Box 16489 - Irvine, CA 92713 - 714/770-0372 (CA+6%, VISA, MC)  
(Shipping prepaid, No bankcard upcharge. No C.O.D. Full payment w/order.)

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## PROGRAMMING EXAMPLES

Some miscellaneous examples and discussions of programming the ATARI 400/800 Home Computer System

- 1) Formatting Dollar Amounts
- 2) Bubble-Sort
- 3) Rocksort
- 4) Real-time Clock
- 5) Getting Data From the Keyboard

Information provided by:

ATARI INC.  
CONSUMER PRODUCT SERVICE  
PRODUCT SUPPORT GROUP  
DEMOPAC #3

### Formatting Dollar Amounts

DEB 5/82

The following program illustrates a method of formatting dollar amounts, on the screen or on a printer. This example accepts input of number amounts between 0 and 9999.99

The program checks each input number and rounds it off to two decimal places, adding trailing zeros if necessary. The number is turned into a string, and concatenated onto a dollar sign. There is some error-checking, for non-numeric or out-of-range input. Output is then formatted into evenly spaced columns.

There are two versions of the program. The first stores the input data in a long-string array in memory, and prints the output on a printer. The second version creates a data file to store the data on cassette or diskette. It then prints the output on the screen.

```
1 REM FORMATTING DOLLAR AMOUNTS
2 REM VERSION 1
3 REM DEB 5/82
4 REM this version stores data in a long-string array
5 REM and prints output on a printer
6 REM ****
10 REM initialization
20 DIM AMOUNT$(20),DOLLAR$(25),YNS$(3),ARRAY$(1000),SPACE$(12)
30 SPACE$="          ":REM format output for evenly spaced columns
40 COUNT=1:REM set counter for number of inputs
50 TRAP 50:PRINT "VALUE..":INPUT AMOUNT:TRAP 40000
55 REM **** format each amount ****
60 SIGN=SGN(AMOUNT):AMOUNT=ABS(AMOUNT):REM keep track of sign
70 AMOUNT=INT((AMOUNT+5.0E-03)*100)/100:REM round for dollar amount
80 AMOUNT=AMOUNT*SIGN:REM restore sign
90 AMOUNT$=STR$(AMOUNT):REM turn amount into string
100 DOLLARLEN=LEN(STR$(INT(AMOUNT))):REM separate dollars from cents
```

```

110 CENTSLEN=LEN(AMOUNT$)-DOLLARLEN
120 IF CENTSLEN=0 THEN AMOUNT$(LEN(AMOUNT$)+1)=".00":REM check for
                           trailing zeros
130 IF CENTSLEN=2 THEN AMOUNT$(LEN(AMOUNT$)+1)="0"
140 DOLLAR$="$      ":REM string containing dollar sign and 4 spaces"
150 TRAP 50:DOLLAR$=DOLLAR$(1,5-DOLLARLEN):REM allow only 4 digit number
160 DOLLAR$(LEN(DOLLAR$)+1)=AMOUNT$:REM concatenate to dollar sign
170 ARRAY$(LEN(ARRAY$)+1)=DOLLAR$:REM add element to array
180 PRINT "ANY MORE";:TRAP 50:INPUT YNS$
190 IF YNS$(1,1)<>"Y" THEN IF YNS$(1,1)<>"N" THEN GOTO 180
200 IF YNS$(1,1)="N" THEN GOTO 240
210 IF COUNT=40 THEN ? "ARRAY FULL":GOTO 240
220 COUNT=COUNT+1:GOTO 50:REM get another number
230 REM ****
235 REM printout routine
240 OPEN #2,8,0,"P":REM open printer file
250 FIELD=1:REM determines location of element in string array
260 COUNT=0:REM check for end of line
270 TRAP 310:PRINT #2;ARRAY$(FIELD,FIELD+7);SPACE;
280 FIELD=FIELD+8:COUNT=COUNT+1
290 IF COUNT=4 THEN PRINT #2:GOTO 260:REM execute carriage return
300 GOTO 270
310 PRINT #2:CLOSE #2:REM close files when data is finished
320 END

```

-----

```

1 REM FORMATTING DOLLAR AMOUNTS
2 REM VERSION 2
3 REM DEB 5/82
4 REM this version stores data in a data file on cassette or disk
5 REM and prints the formatted output on the screen
6 REM ****
10 REM initialization
20 DIM AMOUNT$(20),DOLLAR$(25),YNS$(3)
30 REM OPEN #1,8,0,"C":REM for cassette use
40 OPEN #1,8,0,"D:PRINT.FMT":REM for diskette use
50 TRAP 50:PRINT "VALUE..";:INPUT AMOUNT:TRAP 40000
55 REM **** format each amount ****
60 SIGN=SGN(AMOUNT):AMOUNT=ABS(AMOUNT):REM keep track of sign
70 AMOUNT=INT((AMOUNT+5.0E-03)*100)/100:REM round for dollar amount
80 AMOUNT=AMOUNT*SIGN:REM restore sign
90 AMOUNT$=STR$(AMOUNT):REM turn amount into string
100 DOLLARLEN=LEN(STR$(INT(AMOUNT))):REM separte dollars from cents
110 CENTSLEN=LEN(AMOUNT$)-DOLLARLEN
120 IF CENTSLEN=0 THEN AMOUNT$(LEN(AMOUNT$)+1)=".00":REM check for
                           trailing zeros
130 IF CENTSLEN=2 THEN AMOUNT$(LEN(AMOUNT$)+1)="0"
140 PRINT
150 DOLLAR$="$      ":REM string containing dollar sign and 4 spaces"
160 TRAP 50:DOLLAR$=DOLLAR$(1,5-DOLLARLEN):REM allow only 4 digit number
170 DOLLAR$(LEN(DOLLAR$)+1)=AMOUNT$:REM concatenate to dollar sign
180 PRINT #1;DOLLAR$:REM print formatted string to data file
190 PRINT "ANY MORE";:TRAP 50:INPUT YNS$
200 IF YNS$(1,1)="N" THEN GOTO 230
210 IF YNS$(1,1)<>"Y" THEN IF YNS$(1,1)<>"N" THEN GOTO 190
220 GOTO 50
230 CLOSE #1

```

```

235 REM ****
240 REM get data from data file and print in columns on screen
250 REM OPEN #1,4,0,"C:";REM use for casstee; position tape first
260 OPEN #1,4,0,"D:PRINT.FMT";REM use for diskette
270 POKE 82,0:REM move margin out for even columns
280 OPEN #2,8,0,"S:"
290 ? :? :PRINT #2;" FORMATTED DOLLAR AMOUNTS";:?:?
300 TRAP 330: INPUT #1;DOLLAR$:REM bring in record
310 PRINT #2;DOLLAR$,:REM comma inserts spaces for columns
320 GOTO 300
330 CLOSE #1:CLOSE #2:REM close files when data is finished
340 END

```

## 1 REM BUBBLE SORT

```

2 REM PY/JB 4/82
3 REM the following program illustrates a simple sort process
4 REM :the user inputs numbers, which are kept in a numeric array.
5 REM :T>the array is then sorted and printed out in order.
6 REM ****
10 DIM A(100):REM this array holds the data to be sorted
20 PRINT "HOW MANY ITEMS TO SORT";:INPUT TOTAL
30 FOR I=1 TO TOTAL
40 PRINT "ENTER A NUMBER...";:INPUT NUMBER
50 A(I)=NUMBER:REM assign data element to array
60 NEXT I
65 REM print out unsorted list for comparison
70 FOR I=1 TO TOTAL
80 PRINT A(I)
90 NEXT I
100 REM ****
101 REM sort the array
105 PASS=0:REM keep track of how many times through the list
110 FLAG=0:REM flag=1 indicates that more sorting is necessary
120 FOR I=1 TO TOTAL-1
130 IF A(I+1)>=A(I) THEN 180:REM if this item is less than the next,
135 REM they are in the right order, so skip to the next item
140 TEMP=A(I):REM if they're in the wrong order, store the item
temporarily
150 A(I)=A(I+1):REM in order to
160 A(I+1)=TEMP:REM switch the order
170 FLAG=1:REM set the flag to show that a change was made
180 NEXT I:REM check the next item
190 IF FLAG=1 THEN PASS=PASS+1:PRINT "PASS=";PASS:GOTO 110
191 REM after each pass, check the flag
192 REM to see if any changes were made: if so, try again.
195 REM ****
199 REM print out the sorted list
200 PRINT "SORTED LIST..."
210 FOR I=1 TO TOTAL
220 PRINT A(I)
230 NEXT I
240 PRINT "--END OF PROGRAM--"
250 END

```

```

1 REM ROCKSORT
2 REM WB/JB 4/82
3 REM sort a string of up to 80 characters
4 REM by making the biggest ones 'fall through' to the bottom
5 REM there is background music, and the sort is timed
6 REM ****
10 DIM SORT$(80),BUF$(1),TONE(80):REM set up variables
20 GRAPHICS 0:POKE 82,0:REM clear screen, set left margin at column 0
30 FOR I=1 TO 80 STEP 2:READ T:TONE(I)=T:TONE(I+1)=T:NEXT I
31 REM set up array with tone data for the sound statement
40 DATA 29,31,33,35,37,40,42,45,47,50,53,57,60,64,68,72,76,81,85,91,96
41 DATA 102,108,11,121,128,136,144,153,162,173,182,193
42 DATA 204,217,217,230,230,243,243
45 REM ****
50 PRINT "80 CHARACTER STRING TO BE SORTED"
55 INPUT SORT$
60 LAST=LEN(SORT$):REM keep track of where to stop sorting
70 GRAPHICS 2:PRINT #6;SORT$:REM display string in large letters
80 POKE 752,1:REM disable cursor
90 POKE 18,0:POKE 19,0:POKE 20,0:REM initialize real-time-clock
99 REM ****
100 REM the following section contains the actual sort,
101 REM along with the background music
110 FOR I=LAST-1 TO 1 STEP -1:REM outer loop
120 SOUND 0,TONE(I),10,10:REM first voice of background music
130 FLAG=0:REM this flag turns 1 if any changes are made during the sort
140 FOR J=1 TO I:REM inner loop
150 SOUND 1,TONE(J),10,8:REM second voice of background music
155 REM --here's the sort itself
160 IF SORT$(J,J)>SORT$(J+1,J+1) THEN BUF$=SORT$(J,J):SORT$(J,J)=
    SORT$(J+1,J+1):SORT$(J+1,J+1)=BUF$:K=1
165 REM if top item is larger, exchange places with next item,
    and set flag
170 POSITION 0,0:PRINT #6;SORT$:REM display latest version of string
180 NEXT J:REM inner loop
190 IF K=0 THEN I=1:REM check flag-if no changes, skip to last loop
200 NEXT I:REM outer loop
205 REM ****
206 REM --finnish up--
210 POKE 752,0:REM re-enable cursor
220 SOUND 1,0,0,0:REM turn off second voice
230 FOR I=29 TO 0 STEP -1:SOUND 0,I,10,10:NEXT I:REM 1st voice signals end
240 GOSUB 1000:REM call subroutine which figures elapsed time
250 PRINT "ELAPSED TIME ";HH;":";MM;":";SS;
260 END
265 REM ****
998 REM the following subroutine retrieves the real-time clock values
999 REM and turns the results into hours(HH), munites(MM) and seconds(SS)
1000 SS=(PEEK(18)*256*256+PEEK(19)*256+PEEK(20))/60
1010 HH=INT(SS/(60*60))
1020 SS=SS-HH*60*60
1030 MM=INT(SS/60)
1040 SS=INT(SS-MM*60)
1050 RETURN

```

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## TAKE-ME-OUT-TO-THE-BALLGAME

by Gary Nolan

Last month I asked the musical question "Does Atari want to play hardball?" Well a couple of days before the big game (CES) Atari announced their new team line-up. And the stats look pretty impressive. Leading off will be the 600XL (finally) with 16K, built-in Atari Basic and a "List" of \$199. Next is the 800XL with 64K, built in Basic and a list of \$299. Third is the 1400XL with built in modem, speech capability and Basic. With a list of \$499. In the clean-up spot the home run hitter is the 1400XLD. It sports all the above plus a built-in double sided drive with room for another. The list is "said" to be between \$700 and \$800. Rounding out the new team will be the 1027 letter quality printer, 1030 direct connect modem with built in telecommunication software, the 1050 disk drive (same 88K cap.) (aaaaaaaaaaaaaaaaaaaa), but later this year a new DOS III which gives you 127K of storage. (not impressive, but a step in the right direction!) will be released. Other planned products are a Trak ball, graphics tablet, something called the Atari Expansion System which will allow the new computers to add control cards and special peripherals. And an Atari CP/M external microprocessor upgrade to allow ALL Atari computers to run CP/M. (This I GOTTA see). This is all pre-show info, and while the product data comes from Atari the prices are second hand so the prices might change when I get down to Chitown but the specs should stay the same.

Speaking of the WINDY CITY and the CES, at the June meeting we'll have a report on the CES and the new line-up from Atari featuring slides of interesting computer products, my trip to the Dells and Dave's dog.

### HUH, did somebody say something???

Maybe I didn't say it loud enough or maybe you wern't listening. But the Printer Expo WAS suppose to be this month. I say WAS because it will have to be canceled due to lack of interest. Not on the part of those who would like to buy a printer but from those of you who own them. So much for the volunteer system.

And speaking of printers, AXIOM has a new printer that plugs directly into the 400/800/1200 serial buss and thereby eliminates the need for the 850 Interface. It has a list price of \$299 and can chain a disk or cassette because it too has a serial port on it. Takes up to 10" tractor feed paper, cartridge ribbon, 80 col. wide print at 10 char. per inch, double width char., 30 cps, full graphics capability and a TWO year end-user warranty. If it breaks within that time, they fix it or send you a NEW printer. It might be a little slow, but if all you need is a line printer with some graphics, but the price and warranty make up for it somewhat. AXIOM is part of the Seikosha group, and them's the people that make the EPSON printers.

### SEE DICK RUN. SEE THE DOG JUMP.

The educational special intesest group will hold it's first meeting on June 18th. That's the da of the meeting. The time is 2:00pm and the place is Ambruster school. Joe Sanders, the chairman, along with some others have put together a good looking program . So if you're interested in the educational aspects of computing you'll want to be there.

**THE ENVELOPE PLEASE**

According to a poll taken by Softline magazine the top three games for Atari computers are Star Raiders, Jawbreakers and Pac-Man. Top three applications programs were Visicalc, File Manager 800 and Letter Perfect.

**WHY DOES IT TAKE SO LONG??**

As fast as the 810 is in saving and loading data, as compared to the cassette recorder, it's one of the slowest drives on the market. It also has one of the lowest capacities as far as total bytes, With 88K (formatted). Although the new drive, the 1050, has a faster transfer rate it's capacity is still small. You could by a Percom double density drive, or wait for Rana and Micro Mainframe to get thier drives on the market (Billy stop holding your breath or your face will stay that color!). OR (you knew there was an alternative) you can buy something called the NCT 810 TURBO Conversion Board. For \$295 you get double density (186K), auto sensing of double or single density, data separator, faster reads/writes than any drive available for the Atari twice as fast in DD mode. Two utility programs to allow you to back-up and "pack" disks and a one year warranty round out the features. See feature on page 6 for ordering information.

**SAY WHAT?**

I'll hold off on any Atari rumors until next month. But I do have a good Apple story for you. Apple is going to get into the "home" market. How? By dropping the price of the IIe to \$600. If true, it's sure going to raise some peoples temperatures.

**SAY IT AIN'T SO JOE**

(Or; Which one of you guys is the Big Bad Wolf anyway?)

I wonder if Atari will go ahead with it's suit against Mr. Bushnell now that they've signed thier agreement. You know, the one that gives Atari first dibs on any new arcade game Nolan develops. It's not only politics that makes strange bedfellows.

**SAY GOODNIGHT TO THE NICE PEOPLE,  
GARY**

Dave told me not to get carried away this month. WHAT! ME! Anyway, I've have to go load my camera and pack some things. So untill the 18th, BYE.....

\*\*\*\*\*  
\* OTHER ATARI BBSs \*  
\* FROM A.R.C.A.D.E. BB \*  
\* 313-978-8087 \*  
\* UPDATED 05/08/83 \*  
\* NOTES: \*  
\* L = LIMITED Evenings & Weekends \*  
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